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Application No. 10/038353
Amendment dated January 6, 2006
Reply to Office Action of November 21, 2005

Docket No.: 112153.128 US1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) A platform for automatically deploying at least one virtual processing area network, in response to software commands specifying (i) a number of processors for a virtual processing area network, (ii) a virtual local area network topology defining interconnectivity and switching functionality among the specified processors of the virtual processing area network, and (iii) a virtual storage space for the virtual processing area network, said platform -computer processing, comprising:

a plurality of computer processors connected to an internal communication network; at least one control node in communication with an external communication network and in communication with an external storage network having an external storage address space, and wherein the at least one control node is connected to the internal communication network and thereby in communication with the plurality of computer processors;

configuration logic, responsive to said software commands, to define and establish a virtual processing area network having select, under programmatic control, a corresponding set of computer processors from the plurality of computer processors, to program the selected computer processors and the internal communication network to establish the specified virtual local area network topology a virtual local area communication network providing communication among the set of computer processors but excluding the processors from the plurality not in the defined set, and to program the control node to define a virtual storage space for the virtual processing area network, said virtual storage space having with a defined correspondence to a subset of the external storage address space of the storage network.

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2. (Amended) The platform of claim 1 wherein the at least one control node receives, via the internal communication network, communication messages addressed to entities on the external communication network, and wherein the control node includes logic to provide messages on the external communication network corresponding to the received messages.

3. (Amended) The platform of claim 1 wherein the at least one control node receives, via the external communication network, communication messages addressed to entities on the platform, and wherein the control node includes logic to provide messages to the addressed entities corresponding to the received messages.

4. (Amended) The platform of claim 1 wherein the computer processors and the at least one control node include network emulation logic to emulate Ethernet functionality over the internal communication network.

5. (Original) The platform of claim 4 wherein the internal communication network is a point to point switch fabric.

6. (Original) The platform of claim 1 wherein the internal communication network comprises a redundant interconnect connecting the computer processors and the at least one control node to redundant switch fabrics.

7. (Amended) The platform of claim 6 having at least one other control node connected to the redundant interconnect and to form redundant control nodes.

8. (Amended) The platform of claim 1 wherein the at least one control node receives, via the internal communication network, storage messages from the computer processors, and wherein the control node includes logic to extract an address from a received storage message, to identify the defined corresponding address in the external storage address space, and to provide messages on the external storage network corresponding to the received storage messages and having the corresponding address.

9. (Amended) The platform of claim 8 wherein the at least one control node includes logic to buffer data corresponding to write messages received from a computer

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processor and to provide the buffered data in the corresponding message provided to the external storage network.

10. (Amended) The platform of claim 8 wherein the at least one control node receives storage messages from the external storage network, and wherein the control node includes logic to identify a corresponding computer processor or control node that the received message is responsive to, and to provide a corresponding message to the identified computer processor or control node.

11. (Amended) A method of automatically deploying a at least one virtual processing area network, in response to software commands specifying (i) a number of processors for a virtual processing area network, (ii) a virtual local area network topology defining interconnectivity and switching functionality among the specified processors of the virtual processing area network, and (iii) a virtual storage space for the virtual processing area network, said platform comprising the acts of:

providing a platform having a plurality of computer processors and at least one control node connected to an internal communication network, and wherein the control node is in communication with an external communication network and an external storage network having an external storage address space,

defining under programmatic control and in response to the software commands,
selecting a corresponding set of computer processors for the virtual processing
area network,

establishing under programmatic control and in response to the software commands,
programming the selected processors and the internal network to establish the
specified a virtual local area communication network topology providing
communication among the set of computer processors but excluding the
processors from the plurality not in the defined set,

defining under programmatic control and in response to the software commands,
programming the control node to define correspondence between a virtual storage

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space of the virtual processing network, said virtual storage space having with a defined correspondence to a subset of the external storage address space of the storage network.

12. (Amended) The method of claim 11 wherein the at least one control node receives, via the internal communication network, communication messages addressed to entities on the external communication network, and wherein the control node provides messages on the external communication network corresponding to the received messages.

13. (Amended) The method of claim 11 wherein the at least one control node receives, via the external communication network, communication messages addressed to entities on the platform, and wherein the control node provides messages to the addressed entities corresponding to the received messages.

14. (Amended) The method of claim 11 wherein the computer processors and the at least one control node emulate Ethernet functionality over the internal communication network.

15. (Amended) The method of claim 14 wherein the internal communication network is a point to point switch fabric and wherein the emulation of Ethernet functionality is provided over the internal point to point switch fabric.

16. (Original) The method of claim 11 wherein the computer processors communicate over a redundant interconnect connecting the computer processors and the at least one control node.

17. (Amended) The method of claim 16 having at least one other control node connected to the redundant interconnect and to form redundant control nodes.

18. (Amended) The method of claim 11 wherein the at least one control node receives, via the internal communication network, storage messages from the computer processors, and wherein the control node extracts an address from a received storage message, identifies the defined corresponding address in the external storage address space, and provide

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messages on the external storage network corresponding to the received storage messages and having the corresponding address.

19. (Amended) The method of claim 18 wherein the at least one control node buffers data corresponding to write messages received from a computer processor and provides the buffered data in the corresponding message provided to the external storage network.

20. (Amended) The method of claim 18 wherein the control node receives storage messages from the external storage network, and wherein the control node identifies a corresponding computer processor or control node that the received message is responsive to, and provides a corresponding message to the identified computer processor or control node.